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MONTHLY NOTICES

OF THE

ROYAL ASTRONOMICAL SOCIETY.

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No. 8.

PROFESSOR J. C. ADAMS, President, in the Chair.

John Locke Lancaster, Esq., 25 Hamilton Terrace, St. John's Wood, N.W.;

Francis Richard Wegg-Prosser, M.A., Belmont, Herefordshire, and 84 Eccleston Square, London, S.W., and

Prof. Charles Vencelas Zenger, Prague,

were balloted for and duly elected Fellows of the Society

Description of Two Old Instruments presented to the Society

by R. J. Lecky, Esq.

I have much pleasure in presenting to the Society two instruments, more curious for their antiquity and rarity than for any value they possess. They are a "Nocturnal," or Night Dial, and a Davis' Quadrant, or "Back Staff."

The inventor, as well as the date of the invention of the former, is, I believe, unknown, but the date must have been prior to the 16th century. It is a very inaccurate instrument, merely giving an approximation to the time by the position of stars in *Ursæ Major* and *Minor*

The "Back Staff" was invented about the year 1590 by a Capt. Davis, of Sandridge, near Dartmouth; who sailed to the South Seas with Cavendish; and was the first nautical instrument which had any pretension to accuracy. It is well described in Rees' *Cyclopædia*, article, "Quadrant;" and is, indeed, the instrument from which our present sextant, and the different reflecting circles, have sprung.

Observations with this instrument give the zenith distance

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of the Sun (for which, or perhaps, for a very bright Moon, it was alone useful), and were taken with the observer's back to the Sun, whence its name. The upper vane was set by estimation to a few degrees less than the zenith distance; the observer then directed his sight to the horizon, through the lower or sight vane and the horizon vane, and moved the former along its arch until the Sun's image was thrown through the lens in the upper vane on to the horizon line; when the fiducial edge of the sight vane gave, on a diagonal scale, the odd degrees and minutes, the sum of the readings of the two arches giving the correct result: a clear horizon to the north, or opposite to the Sun, being required.

Should the Society deem these worthy of acceptance, I shall be glad to have them deposited in their collection, as forming an early link in the chain of such inventions.

The Quadrant is complete, and all original, except the upper vane, which I have supplied.

The thanks of the Meeting were voted to Mr. Lecky, for his present to the Society.—Ed.

Note on the Erection of Mr. De La Rue's Telescopes in the New Observatory of the University of Oxford. By Warren De La Rue, Esq.

It may be of interest to the Fellows of our Society to know that the instruments which I presented some time back to the University of Oxford are now placed in position in the New Observatory erected by that body in the Park. These instruments comprise my 13-inch reflecting Equatoreal, used by me, first at Canonbury and lastly at Cranford; a Zoneing Altazimuth with a 13-inch speculum; a polishing machine with every appliance necessary for polishing both parabolic and plane mirrors; and also Foucault's apparatus for testing mirrors. In all these are four interchangeable 13-inch mirrors, two of metal polished by myself, one of glass by Steinheil, and one of glass by With. Observations are now being made by Professor Pritchard, to enable me to make the very minute final adjustments of the Equatoreal.

While making observations for the preliminary adjustments I inadvertently used my left eye, and was surprised and delighted to find that I had recovered perfect vision with it, the granulations in the centre of the retina having disappeared.